



DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
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NOTICE OF ACCEPTANCE (NOA)

Mid-States Asphalt & Cant Strip, Inc.
1637 51st Avenue
Tuscaloosa, AL 35401

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER - Product Control Section to be used in Miami-Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (in Miami-Dade County) and/or the AHJ (in areas other than Miami-Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code including the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: MSA - BUR Systems over Concrete Decks.

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state, model/ series and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA revises and renews NOA No.15-0406.08 and consists of pages 1 through 15.
The submitted documentation was reviewed by Gaspar J Rodriguez.



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Expiration Date: 02/09/22
Approval Date: 10/20/16
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ROOFING SYSTEM APPROVAL

Category: Roofing
Sub-Category: Built-Up Roofing
Material: Fiberglass
Deck Type: Concrete
Maximum Design Pressure: -90 psf

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specification	Product Description
Arrowglass Base	36" x 108'	ASTM D 4601 Type II	A non-porous 28 pound base sheet consisting of a heavyweight, fiberglass mat saturated with type IV asphalt with a sand surfacing. For use as a mechanically fastened or adhered base sheet in a wide variety of built-up roofing applications.
MSA MG2 Base Sheet	36" x 108'	ASTM D 4601 Type II	A non-porous 28 pound base sheet consisting of a heavyweight, fiberglass mat saturated with polymer modified asphalt with a sand surfacing. For use as a mechanically fastened or adhered base sheet in a wide variety of built-up roofing applications.
MSA Ply 4	36" x 180'	ASTM D 2178 Type IV	A heavyweight fiberglass mat saturated with type IV asphalt, giving excellent strength and weathering characteristics. For use as a ply sheet in hot mopped built-up roofing applications
MSA Ply 6	36" x 180'	ASTM D 2178 Type VI	A heavyweight fiberglass mat saturated with type IV asphalt, giving excellent strength and weathering characteristics. For use as a ply sheet in hot mopped built-up roofing applications
MSA MSR	36" x 36'	ASTM D 3909	A high strength non-woven fiberglass carrier for added dimensional stability coated on both sides with premium grade asphalt. Mineral granule surfacing for superior weathering characteristics.



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APPROVED INSULATIONS:

TABLE 2

<u>Product</u>	<u>Product Description</u>	<u>Manufacturer</u> (With current NOA)
ACFoam II	Polyisocyanurate foam insulation	Atlas Energy Products
ACFoam Composite	Composite Insulation board	Atlas Energy Products
ISO 95+ GL	Polyisocyanurate foam insulation	Firestone Bldg. Products
ISOGARD HD Composite	Composite Insulation board	Firestone Bldg. Products
EnergyGuard Perlite Recover Board, EnergyGuard Perlite	Rigid perlite roof insulation board	GAF Material Corp.
ENRGY-3	Polyisocyanurate foam insulation	Johns Manville Corp.
ENRGY 3 Plus, Fesco Foam	Polyisocyanurate / wood fiber insulation	Johns Manville
ENRGY-3 Composite	Composite Insulation board	Johns Manville Corp.
Fesco Board, Retro-Fit Board	Rigid perlite roof insulation board	Johns Manville Corp.
DensDeck®	Water resistant gypsum board	G-P Gypsum Corp.
Thermarroof Composite-3	Composite Insulation board	RMax
Multi-Max FA-3	Polyisocyanurate foam insulation	RMax



APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	Dekfast 12	Insulation fastener	Various	SFS Intec.
2.	Dekfast 14	Insulation fastener	Various	SFS Intec.
3.	Dekfast 15 HS	Insulation fastener	Various	SFS Intec.
4.	Dekfast 12 Hex	Insulation fastener	Various	SFS Intec.
5.	Dekfast Galvalume Steel Hex Plate	Galvalume stress plate.	2 7/8" x 3 1/4"	SFS Intec.
6.	Dekfast Galvalume Steel 3" Round	Galvalume stress plate.	3"	SFS Intec.
7.	Dekfast Lock Plate	Polypropylene stress plate.	3" x 3 1/4"	SFS Intec.
8.	Dekfast Recessed Galvalume Steel Hex	Galvalume hex stress plate.	2 7/8" x 3 1/4"	SFS Intec.
9.	Dekfast System ES #12 Steel	Pre-assembled fastener and plate	Various	SFS Intec.
10.	Dekfast System ES #14 Plastic	Pre-assembled fastener and plate	Various	SFS Intec.
11.	Firestone All-Purpose Fastener	Insulation and membrane fastener	Various	Firestone Building Products
12.	Firestone Heavy Duty	Insulation and membrane fastener	Various	Firestone Building Products
13.	#12 Standard Stainless Steel	Insulation and membrane fastener	Various	OMG
14.	#12 Standard Hex Head	Insulation and membrane fastener	Various	OMG
15.	#12 Standard Roofgrip	Insulation and membrane fastener	Various	OMG
16.	OMG Heavy Duty	Insulation and membrane fastener	Various	OMG
17.	CD-10	Insulation and membrane fastener	Various	OMG
18.	Strap Toggle	Insulation and membrane fastener	Various	OMG
19.	3" Round Metal Plate and AccuTrac Plate	Galvalume AZ55 stress plate	3" round 3" square	OMG
20.	OMG Plastic Plate	Polypropylene stress plate	3" round	OMG
21.	Tru-Fast SIP LD Fastener	Insulation and membrane fastener	Various	Altenloh, Brinck & Co.
22.	Tru-Fast #12 DP Fastener	Insulation and membrane fastener	Various	Altenloh, Brinck & Co.
23.	Tru-Fast #12 DPH Fastener	Insulation and membrane fastener	Various	Altenloh, Brinck & Co.
24.	Tru-Fast #14 HD Fastener	Insulation and membrane fastener	Various	Altenloh, Brinck & Co.
25.	TruFast DP Pre-Assembled Insulation Plate	Pre-assembled fastener and plate	Various	Altenloh, Brinck & Co
26.	TruFast 3" Metal Insulation Plate	Stress Plate	3" Round	Altenloh, Brinck & Co
27.	TruFast 3" Recessed Metal Insulation Plate	Stress Plate	3" Round	Altenloh, Brinck & Co



EVIDENCE SUBMITTED:

<u>Test Agency</u>	<u>Test Identifier</u>	<u>Test Name/Report</u>	<u>Date</u>
Factory Mutual Research	3004059	FM 4470	06/08/10
PRI Construction Material Technologies	BWR-506-02-01 (rev)	ASTM D 2178	01/23/09
	BWR-530-02-01	ASTM D 4601	12/03/10
	BWR-508-02-01	ASTM D 4601	01/23/09
	BWR-505-02-01(rev)	ASTM D 2178	01/23/09
	BWR-539-02-01	ASTM D 3909	07/24/13
	MSA-018-02-01	TAS 114 D	11/30/15
	FBP-063-02-01	TAS 114 E	07/10/12



APPROVED ASSEMBLIES

Membrane Type: BUR

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(1): All layers of insulation adhered with approved asphalt onto deck.

All General and System limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer

**Insulation Fasteners
(Table 3)**

**Fastener
Density/ft²**

**AC Foam II, ISO 95+ GL, Multi-Max FA-3
Minimum 1.5" thick**

N/A

N/A

Top Insulation Layer

**Insulation Fasteners
(Table 3)**

**Fastener
Density/ft²**

**Fesco Board, EnergyGuard Perlite
Minimum 1" thick**

N/A

N/A

Note: All insulation shall be adhered to the deck in full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 lbs/100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

Base Sheet: Install One ply of Arrowglass Base or MSA MG2 Base Sheet directly to the insulated substrate with a 4" lap. Adhere in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: Two or more plies of MSA Ply 4 or MSA Ply 6 ply sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. to the base sheet.

Cap Sheet: (Optional) One ply of MSA MSR Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. to the base sheet.

Surfacing: Install the following: (When Cap Sheet is not used)
1. Flood coat of hot asphalt at an application rate of 60 lbs./sq.; plus gravel fully embeded at an application rate of 400 lbs./sq.

Maximum Design

Pressure: -90 psf (See General Limitation #9.)



Membrane Type: BUR
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(2): All layers of insulation adhered with approved asphalt onto primed deck.

All General and System limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ENRGY-3 Composite, ENRGY 3 Plus, ACFoam Composite, Thermarroof Composite-3, ISOGARD HD Composite, Fesco Foam Minimum 1.5" thick	N/A	N/A
Top Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
Fesco Board, EnergyGuard Perlite, EnergyGuard Perlite Recover Board Minimum 1" thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of insulation. All insulation shall be adhered to the primed deck in full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 lbs/100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

Base Sheet: Install One ply of Arrowglass Base or MSA MG2 Base Sheet directly to the insulated substrate with a 4" lap. Adhere in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: Two or more plies of MSA Ply 4 or MSA Ply 6 ply sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. to the base sheet.

Cap Sheet: (Optional) One ply of MSA MSR Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. to the base sheet.

Surfacing: Install the following: (When Cap Sheet is not used)

1. Flood coat of hot asphalt at an application rate of 60 lbs./sq.; plus gravel fully embedded at an application rate of 400 lbs./sq.

Maximum Design Pressure: -45 psf (See General Limitation #9.)



Membrane Type: BUR
Deck Type 3I: Concrete, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type B(1): Base layer of insulation mechanically fastened, top layer adhered with approved asphalt.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ENRGY-3 Composite, ENRGY 3 Plus, ACFoam Composite, Thermarroof Composite-3, ISO GARD HD Composite, Fesco Foam Minimum 1.5" thick	1, 2, 6, 7, 8, 11, 12, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27	1:2 ft ²

Note: Base layers of insulation shall be mechanically attached using the fastener density listed. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Insulation fasteners shall be tested for withdrawal resistance in compliance with Protocol TAS 105 to confirm compliance with the wind load requirements. Please refer to Roofing Application Standard RAS 117 for insulation attachment..

Top Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft ²
EnergyGuard Perlite, Fesco Board Minimum ¾" thick	N/A	N/A

Note: Top layer of insulation shall be adhered with approved hot asphalt, within the EVT range and at a rate of 20-40 lbs/100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as the base layer shall only be used as the base layer with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side face down.

Base Sheet: Install One ply of Arrowglass Base or MSA MG2 Base Sheet directly to the insulated substrate with a 4" lap. Adhere in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: Two or more plies of MSA Ply 4 or MSA Ply 6 ply sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. to the base sheet.

Cap Sheet: (Optional) One ply of MSA MSR Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. to the base sheet.

Surfacing: Install the following: (When Cap Sheet is not used)

1. Flood coat of hot asphalt at an application rate of 60 lbs./sq.; plus gravel fully embedded at an application rate of 400 lbs./sq.

Maximum Design Pressure: -45 psf (See General Limitation #9.)



Membrane Type: BUR
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type B(2): Base/Intermideate layer of insulation mechanically fastened, top layer adhered with approved asphalt.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
EnergyGuard Perlite, Fesco Board Minimum ¾" thick	N/A	N/A

Note: Optopnal Base layer of insulation shall be loose laid with preliminary fastening.

Base/Intermideate Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ACFoam II, Multi-Max FA-3, ISO 95+ GL Minimum 1.5" thick	1, 2, 6, 7, 8, 11, 12, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27	1:2 ft ²

Note: Base/Intermideate layers of insulation shall be mechanically attached using the fastener density listed. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Insulation fasteners shall be tested for withdrawal resistance in compliance with Protocol TAS 105 to confirm compliance with the wind load requirements. Please refer to Roofing Application Standard RAS 117 for insulation attachment..

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
EnergyGuard Perlite, Fesco Board Minimum ½" thick	N/A	N/A

Note: Top layer of insulation shall be adhered with approved hot asphalt, within the EVT range and at a rate of 20-40 lbs/100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as the base layer shall only be used as the base layer with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side face down.

Base Sheet: Install One ply of Arrowglass Base or MSA MG2 Base Sheet directly to the insulated substrate with a 4" lap. Adhere in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: Two or more plies of MSA Ply 4 or MSA Ply 6 ply sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. to the base sheet.

Cap Sheet: (Optional) One ply of MSA MSR Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. to the base sheet.

Surfacing: Install the following: (When Cap Sheet is not used)
 1. Flood coat of hot asphalt at an application rate of 60 lbs./sq.; plus gravel fully embedded at an application rate of 400 lbs./sq.

Maximum Design Pressure: -45 psf (See General Limitation #9.)



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Membrane Type: BUR
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type B(3): Base layer of insulation mechanically fastened, top layer adhered with approved asphalt.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL Minimum 1.5" thick	11 with 5	1:3.2 ft ²
ISO 95+ GL Minimum 2" thick	11 with 5	1:4 ft ²

Note: Base layers of insulation shall be mechanically attached using the fastener density listed. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Insulation fasteners shall be tested for withdrawal resistance in compliance with Protocol TAS 105 to confirm compliance with the wind load requirements. Please refer to Roofing Application Standard RAS 117 for insulation attachment..

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
EnergyGuard Perlite, Fesco Board Minimum ¾" thick	N/A	N/A
DensDeck Minimum ¼" thick	N/A	N/A

Note: Top layer of insulation shall be adhered with approved hot asphalt, within the EVT range and at a rate of 20-40 lbs/100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as the base layer shall only be used as the base layer with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side face down.

Base Sheet: Install One ply of Arrowglass Base or MSA MG2 Base Sheet directly to the insulated substrate with a 4" lap. Adhere in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: Two or more plies of MSA Ply 4 or MSA Ply 6 ply sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. to the base sheet.

Cap Sheet: (Optional) One ply of MSA MSR Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. to the base sheet.

Surfacing: Install the following: (When Cap Sheet is not used)

1. Flood coat of hot asphalt at an application rate of 60 lbs./sq.; plus gravel fully embeded at an application rate of 400 lbs./sq.

Maximum Design Pressure: -45 psf (See General Limitation #9.)



Membrane Type: BUR
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type B(4): Base layer of insulation mechanically fastened, top layer adhered with approved asphalt.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ACFoam II, Multi-Max FA-3, ISO 95+ GL Minimum 1.5" thick	1, 2, 6, 7, 8, 11, 12, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27	1:2 ft ²

Note: Base layers of insulation shall be mechanically attached using the fastener density listed. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Insulation fasteners shall be tested for withdrawal resistance in compliance with Protocol TAS 105 to confirm compliance with the wind load requirements. Please refer to Roofing Application Standard RAS 117 for insulation attachment..

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
EnergyGuard Perlite, Fesco Board Minimum ¾" thick	N/A	N/A

Note: Top layer of insulation shall be adhered with approved hot asphalt, within the EVT range and at a rate of 20-40 lbs/100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as the base layer shall only be used as the base layer with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side face down.

Base Sheet: Install One ply of Arrowglass Base or MSA MG2 Base Sheet directly to the insulated substrate with a 4" lap. Adhere in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: Two or more plies of MSA Ply 4 or MSA Ply 6 ply sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. to the base sheet.

Cap Sheet: (Optional) One ply of MSA MSR Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. to the base sheet.

Surfacing: Install the following: (When Cap Sheet is not used)
 1. Flood coat of hot asphalt at an application rate of 60 lbs./sq.; plus gravel fully embedded at an application rate of 400 lbs./sq.

Maximum Design Pressure: -45 psf (See General Limitation #9.)



Membrane Type: BUR
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type C(1): All layers of insulation simultaneously fastened.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ENRGY-3 Composite, ENRGY 3 Plus, AC Foam Composite, Thermarof Composite-3, ISOGARD HD Composite, Fesco Foam Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
EnergyGuard Perlite, Fesco Board Minimum ¾" thick	1, 2, 6, 7, 8, 11, 12, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27	1:2 ft ²

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Insulation fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: Install One ply of Arrowglass Base or MSA MG2 Base Sheet directly to the insulated substrate with a 4" lap. Adhere in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: Two or more plies of MSA Ply 4 or MSA Ply 6 ply sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. to the base sheet.

Cap Sheet: (Optional) One ply of MSA MSR Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. to the base sheet.

Surfacing: Install the following: (When Cap Sheet is not used)

1. Flood coat of hot asphalt at an application rate of 60 lbs./sq.; plus gravel fully embedded at an application rate of 400 lbs./sq.

Maximum Design Pressure: -45 psf (See General Limitation #9.)



Membrane Type: BUR
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type D: All layers of insulation and base sheet simultaneously attached to deck.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
EnergyGuard Perlite, Fesco Board Minimum ¾" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ACFoam II, Multi-Max FA-3, ISO 95+ GL Minimum 1.5" thick	N/A	N/A

Note: Top layer shall have preliminary attachment, prior to the installation of the base/anchor sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density.

Base Sheet: Install One ply of Arrowglass Base or MSA MG2 Base Sheet with fasteners spaced 18" o.c. in the 4" lap and in one row in the center of the sheet. Fasteners shall be as described below.

Fastener: Option#1 Dekfast #12, Dekfast #14, Dekfast Galvalume Steel Hex Plate or Dekfast Recessed Galvalume Steel Hex ; Dekfast #15 HS with Dekfast Lock Plate.

Fastener: Option#2 Firestone All Purpose Fastener or Firestone Heavy Duty Fastener with Dekfast Galvalume Steel Hex Plate.

Fastener: Option#3 CD-10, 3" Round Metal Plate and AccuTrac Plate, OMG Heavy Duty, #12 Standard Stainless Steel, #12 Standard Hex Head, Strap Toggle with 3" Round Metal Plate and AccuTrac Plate.

Fastener: Option#4 Dekfast #14, Deckfast #15 HS Fasteners with Dekfast Galvalume Steel 3" Round plate; Dekfast System ES #12 Steel or Dekfast System ES #14 Steel.

Fastener: Option#5 Tru-Fast #12 DP Fastener, Tru-Fast #14 HD Fastener, or Tru-Fast SIP LD Fastener with Tru-Fast 3" Metal Insulation Plate; Tru-Fast #12 DP-H Fastener with TruFast 3" Recessed Metal Insulation Plate; Tru-Fast DP Pre-Assembled Insulation Plate.

Ply Sheet: Two or more plies of MSA Ply 4 or MSA Ply 6 ply sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. to the base sheet.

Cap Sheet: (Optional) One ply of MSA MSR Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. to the base sheet.

Surfacing: Install the following: (When Cap Sheet is not used)

1. Flood coat of hot asphalt at an application rate of 60 lbs./sq.; plus gravel fully embedded at an application rate of 400 lbs./sq.

Maximum Design Pressure: -45 psf (See General Limitation #9.)



Membrane Type: BUR
Deck Type 3I: Concrete Decks, Non-Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type F: Roof system adhered with approved asphalt directly onto deck.

All General and System limitations apply.

Base Sheet: Install One ply of Arrowglass Base or MSA MG2 Base Sheet directly to the deck with a 4" lap. Adhere in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: Two or more plies of MSA Ply 4 or MSA Ply 6 ply sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. to the base sheet.

Cap Sheet: (Optional) One ply of MSA MSR Cap Sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. to the base sheet.

Surfacing: Install the following: (When Cap Sheet is not used)

1. Flood coat of hot asphalt at an application rate of 60 lbs./sq.; plus gravel fully embedded at an application rate of 400 lbs./sq.

Maximum Design Pressure: -90 psf (See General Limitation #9.)



CONCRETE DECK SYSTEM LIMITATIONS:

1. If mechanical attachment to the structural deck through the lightweight insulating concrete is proposed, a field withdrawal resistance testing shall be performed to determine equivalent or enhanced fastener patterns and density. All testing and fastening design shall be in compliance with Testing Application Standard TAS 105 and Roofing Application Standard RAS 117, calculations shall be signed and sealed by a Florida Registered Engineer, Architect, or Registered Roof Consultant.

GENERAL LIMITATIONS:

1. Fire classification is not part of this acceptance, refer to a current Approved Roofing Materials Directory for fire ratings of this product.
2. Insulation may be installed in multiple layers. The first layer shall be attached in compliance with Product Control Approval guidelines. All other layers shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq., or mechanically attached using the fastening pattern of the top layer
3. All standard panel sizes are acceptable for mechanical attachment. When applied in approved asphalt, panel size shall be 4' x 4' maximum.
4. An overlay and/or recovery board insulation panel is required on all applications over closed cell foam insulations when the base sheet is fully mopped. If no recovery board is used the base sheet shall be applied using spot mopping with approved asphalt, 12" diameter circles, 24" o.c.; or strip mopped 8" ribbons in three rows, one at each sidelap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq.

Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.

5. Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field-tested, are below 275 lbf. insulation attachment shall not be acceptable.
6. Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within a specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida Registered Engineer, Architect, or Registered Roof Consultant may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Testing Application Standards TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.
7. Perimeter and corner areas shall comply with the enhanced uplift pressure requirements of these areas. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Roofing Application Standard RAS 117. Calculations prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant **(When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)**
8. All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform with Roofing Application Standard RAS 111 and applicable wind load requirements.
9. The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, and corners). Neither rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners and corners). **(When this limitation is specifically referred within this NOA, General Limitation #7 will not be applicable.)**
10. All products listed herein shall have a quality assurance audit in accordance with the Florida Building Code and Rule 61G20-3 of the Florida Administrative Code.

END OF THIS ACCEPTANCE



NOA No: 16-0728.20
Expiration Date: 02/09/22
Approval Date: 10/20/16
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